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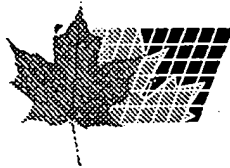
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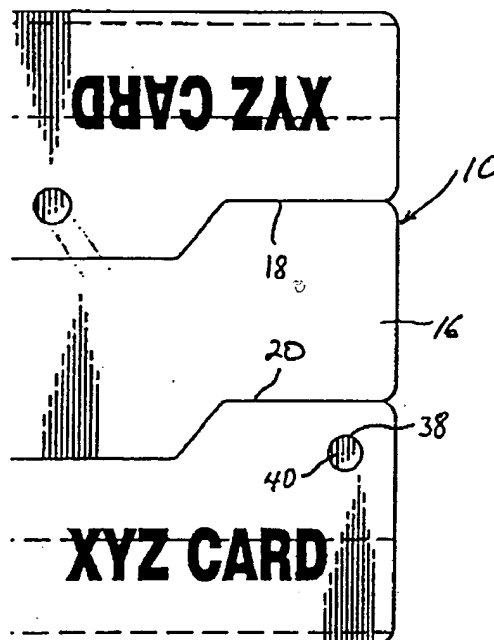
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(54) **CARTE DE PORTE-CLES COMPRENANT UNE BANDE  
MAGNETIQUE A ENCODER**

(54) **A KEYTAG CARD HAVING ENCODEABLE MAGNETIC STRIP**



(57) A small identification card comprises a substantially flat body presenting opposite front and rear faces. The card length defined between the pair of elongated spaced apart side edges of the body is approximately 1.75 to 3.00 inches. The card height defined between the pair of elongated spaced apart end edges extending between the side edges is no more than approximately 1.625 inches and is at least 1.1875 inches along at least a portion of the card length. Moreover, the rear face of the body is provided with an encodeable magnetic strip that extends between the side edges.



## A KEYTAG CARD HAVING ENCODEABLE MAGNETIC STRIP

### BACKGROUND OF THE INVENTION

#### 1. Field of the Invention

5           The present invention relates generally to identification cards, such as credit cards and customer loyalty cards. More particularly, the present invention concerns a relatively small identification card (e.g., a keytag card) that is provided with an encodeable magnetic strip.

#### 10           2. Discussion of Prior Art

Those ordinarily skilled in the art will appreciate that identification cards traditionally had a standard size and shape. It is believed that this design was initially chosen in an attempt to correspond with the shape and size of a typical business card. For example, a traditional credit card has a rectangular shape and is approximately 3.375 inches in length and 2.125 inches in height. It is also believed that these parameters were dictated by the conventional wisdom regarding encodeable magnetic strips. That is to say, it has heretofore been understood that an identification card employing a magnetic strip must be approximately the standard card length; otherwise, the strip is not encodeable.

20           Recently, however, alternative identification card designs have been introduced. These alternative card designs are commonly much smaller than a traditional card. For example, small identification cards are now being configured for attachment to a key chain. This type of small identification card is often referred to as a "keytag card."

25           It is believed that all of the relatively small card designs have heretofore utilized only bar coding to store the identification information. Those ordinarily skilled in the art will appreciate that bar coding permits the typical identification information (e.g., a sixteen digit number) to be stored on a space that is much smaller than that provided by the traditional card design. Because of this and the conventional wisdom regarding encodeable magnetic strips, the relatively small alternative card designs have not employed a magnetic strip to store the desired identification information. However, a large number of locations utilizing personal identification cards do not have the relatively expensive systems for reading bar codes.

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## OBJECTS AND SUMMARY OF THE INVENTION

Responsive to these and other problems, an important object of the present invention is to provide a small identification card that does not require a bar code to store the identification information. It is particularly an object of the present invention to provide a keytag card that has the identification information stored thereon without the use of bar coding. It is also an object of the present invention to provide a small identification card that can be used with traditional magnetic card encoders and reading machines.

In accordance with these and other objects evident from the following description of the preferred embodiment, the present invention concerns a small identification card that has an encodeable magnetic strip provided on the rear face thereof. Contrary to conventional wisdom, it has been determined that the typical identification information (e.g., a sixteen digit number) can be encoded and detected on a magnetic strip as short as 1.75 inches, although a number of the so-called "magnetic card reading machines" require a strip length of 2.00 inches. In addition, it has been determined that damage to the card, when the card is placed on a key chain, is less likely as a result of the card length being equal to or less than 3.00 inches. Particularly, keys customarily do not exceed 3.00 inches in length, and it is believed that the keys adjacent the card will reduce the risk of bending of the card along its length. Furthermore, the inventive identification card has a height that is no more than approximately 1.625 inches and is at least 1.1875 inches along at least part of the card length. The maximum card height is believed to improve comfort when the card is placed on a key chain. Moreover, it is believed that the minimum card height, which is necessary along only part of the card, facilitates swiping of the card through a conventional card reading machine. It will be appreciated that a conventional card reading machine includes a slot in which the card is placed when the magnetic strip is read. The minimum card height ensures that the user can firmly grasp the card during movement through the slot of the card reading machine.

Other aspects and advantages of the present invention will be apparent from the following detailed description of the preferred embodiments and the accompanying drawing figures.

**BRIEF DESCRIPTION OF THE DRAWING FIGURES**

Preferred embodiments of the invention are described in detail below with reference to the attached drawing figures, wherein:

FIG. 1 is a plan view of a card assembly including a pair of identification cards constructed in accordance with the principles of the present invention and a blank releasably interconnecting the cards;

FIG. 2 is a plan view of one of the cards shown in FIG. 1, particularly illustrating the critical dimensions of the card;

FIG. 3 is a perspective view of the front of the card shown in FIG. 2, particularly illustrating the card being attached to a conventional key chain;

FIG. 4 is a perspective view of the rear of the card shown in FIG. 2, particularly illustrating the encodeable magnetic strip provided on the rear face of the card; and

FIG. 5 is an alternative embodiment of the present invention wherein the card has a rectangular shape.

**DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS**

Turning initially to FIG. 1, a card assembly 10 constructed in accordance with the principles of the present invention is shown as including a pair of keytag cards 12 and 14 interconnected by a material blank 16. Those ordinarily skilled in the art will appreciate that the assembly 10 is typically provided as a set to the customer. In this respect, the cards 12 and 14 will have the same identification information encoded thereon. The illustrated assembly 10 is preferably formed from a sheet of substantially rigid material (e.g., plastic, paper, or a laminated combination thereof), with the sheet being die cut into multiple card assemblies. The card assembly 10 includes a pair of weakness lines 18 and 20 formed at the interfaces between the blank 16 and cards 12, 14. The weakness lines 18 and 20 serve to facilitate separation of the cards 12, 14 from the blank 16 and may be formed by traditional techniques, such as scoring. If desired, the blank 16 may be provided with printed indicia, such as a bar code or a card brand label, although the blank 16 has little or no use apart from the assembly 10. It is also noted that the cards 12 and 14 are identical in construction. Thus, it shall be sufficient to detailedly describe the card 14 herein, with the understanding that the card 12 is similarly constructed.

The card 14 comprises a substantially flat body that presents a front face 22 (see FIGS. 2 and 3) and an opposite rear face 24 (see FIG. 4). The illustrated faces 22 and 24 are flat, although it is entire within the ambit of the present invention to provide embossed lettering or numbering on the card 14. In the usual manner, the front face 22 is printed with indicia 25 representing the card brand. Of course, the indicia printed on the front face 22 of the card 14 may be varied as desired. The rear face 24 may also be printed with indicia, although none is shown. Moreover, the rear face 24 is provided with a magnetic strip 26, which will be described further hereinbelow.

The card 14 further presents a pair of spaced apart side edges 28 and 30, the former of which is shorter than the latter. The illustrated side edges 28 and 30 are substantially flat and therefore parallel to one another. It is particularly noted that a card length (referenced by the letter "a" in FIG. 2) is defined between the side edges.

A pair of spaced apart end edges 32 and 34 extend between the side edges 28 and 30. The lower end edge 34 is generally straight. On the other hand, the upper end edge 32 presents a pair of spaced apart outer sections 32a and 32b that extend normally inwardly from the respective side edges 28 and 30 and are consequently parallel to the lower end edge 34. An intermediate transition section 32c that is oblique relative to the lower end edge 32 extends between the outer sections 32a and 32b. In this respect, the upper end edge 32 cooperates with the lower end edge 34 to define a card height that varies along the length of the card 14. Because the illustrated edge sections 32a, 32b, 32c are generally straight, the card height is at a maximum value (referenced by the letter "b" in FIG. 2) along the outer edge section 32b and at a minimum value (referenced by the letter "c" in FIG. 2) along the outer edge section 32a.

It is noted that the side edges 28 and 30 cooperate with the end edges 32 and 34 to define four outer corners of the card 14. As perhaps best shown in FIG. 2, the illustrated corners are rounded to improve comfort and prevent snagging. Adjacent the upper right hand corner of the card 14 (when viewing FIG. 2) is a key chain receiving opening 36 extending between the front and rear faces 22 and 24. The illustrated opening is circular in shape and is formed during fabrication of the assembly 10. As shown in FIG. 1, a circular weakness line 38 is provided in the card 14 in a manner similar to weakness lines 18 and 20, and the user may simply punch out the disk-shaped blank 40 when it is desired to place the card 14 on a key chain 42 (see FIGS. 3 and 4). Although the key chain 42 is shown as being received within the opening 36, it is entirely within the ambit of the present invention to place the card 14 on various other suitable

structure. For example, the card 14 may likewise be placed on a key ring (not shown). Thus, it shall be appreciated that the key chain 42 is used simply for purposes of illustration, and this structure shall therefore be interpreted herein to be only a representation of the various other suitable structure which may be inserted into the opening 36.

Turning now specifically to the means for storing the identification information, the magnetic strip 26 extends along the rear face 24 between the side edges 28 and 30. It may consequently be said that the illustrated strip 26 extends the full length of the card 14, although the card may be provided with a strip that does not extend from side edge 28 to side edge 30 if desired. In the usual manner, the magnetic strip 26 is formed of a straight-edged band that runs generally parallel to the lower edge 34 of the card 14. In addition, the magnetic strip 26 is spaced just above the straight lower edge 34 so that the strip is encodeable by standard encoders and readable by standard card reading machines when the lower edge 34 is placed against the floor of the slot. The magnetic strip 26 presents a height (referenced by the letter "e" in Fig. 4), which will be described further hereinbelow.

The magnetic strip 26 is traditionally encoded with a unique multiple digit number which may be used for a variety of reasons. For example, when the card is used as part of a credit system (e.g., the system provided under the mark "MASTERCARD"), the encoded number is used as a personal identifier that provides access to information concerning the cardholder, such as available credit. The encoded number is often used simply as a password or as verification that the cardholder is authorized to participate in a system (e.g., a customer loyalty system such as those found at local grocery stores), although even in these systems the encoded number will typically also serve as a personal identifier. It will be appreciated that encoded numbers on magnetic strips are used in the same manner as bar-coded cards, and these cards are often used interchangeably.

Those ordinarily skilled in the art will appreciate that conventional wisdom would suggest that the illustrated card 14 must be the standard card length (e.g., approximately 3.375 inches) for the typical identification information (e.g., a sixteen digit number) to be encoded on and read from the magnetic strip 26. However, I have determined that such information can be encoded on and read from a magnetic strip 26 that is only approximately 1.75 inches in length. Because the illustrated strip 26 extends the full length of the card 14, the card length "a" may likewise be as short as approximately 1.75 inches. It is noted that this unexpectedly small card length is limited

to only certain card reading machines and that some card reading machines (e.g., Model 380X2 available from Verifone) require a minimum card length of approximately 2.00 inches. Nonetheless, the illustrated card can consequently be much shorter than what was previously believed to be necessary for encoding and reading information on the magnetic strip 26. It is also believed that the card length "a" should not exceed approximately 3.00 inches. It will be appreciated that, when the card 14 is placed on the key chain 42, the keys (not shown) adjacent the card 14 will likely inhibit bending of the card 14. Thus, it is believed that the card 14 should not project much, if at all, beyond the keys on the key chain 42. Traditionally, keys are typically not longer than approximately 3.00 inches.

It is also believed that the card height should not exceed approximately 1.625 inches anywhere along the length of the card 14, as anything beyond this height would create discomfort when the key chain 42 is placed in a hip pocket. Moreover, it is believed that the card height must be at least approximately 1.1875 inches along at least part of the length of the card 14. This minimum card height permits the user to firmly grasp the card 14 as it is swiped through the slot of a standard card reading machine.

With respect to the dimensions of the embodiment shown in FIGS. 1-4, the preferred card length "a" is approximately 2.125 inches. The card height "c" along the outer section 32a is approximately 1.00 inch, while the card height "b" along the outer section 32b is approximately 1.313 inches. In this respect, the portion of the card 14 projecting above the outer section 32a is particularly configured to be gripped by the user during swiping of the card 14 through the slot of a standard card reading machine. It will be appreciated that the card height "c" along the outer section 32a may be less than that set forth above, as long as sufficient space is provided for the magnetic strip 26. It is also noted that the thickness of the card (referenced by the letter "d" in FIG. 3) may vary as desired, as long as the card has sufficient rigidity. In the preferred embodiment, the card thickness "d" is between approximately ten and thirty millimeters, although a thickness of thirty millimeters is most preferred.

Preferably, the height "e" of the magnetic strip 26 is approximately .500 inch. Although this preferred height is greater than that on most standard identification cards, it is believed that this dimension ensures proper encoding and reading of the identification information on the magnetic strip 26. It will be appreciated that the natural tendency is to move the card 14 through a slight arc when it is manually swiped through



the encoder. This is often referred to as the "rainbow effect." The identification information is consequently often stored along a slightly arcuate path. Thus, if the strip 26 is short, there might be a tendency for the identification information to be incompletely encoded by the encoder. It is believed that these problems are magnified as a result of the card 14 being so short.

It is entirely within the ambit of the present invention to vary the card design as long as the dimensions remain within the above-noted parameters. For example, FIG. 5 depicts an alternative card 100 constructed in accordance with the principles of the present invention. The card 100 comprises a flat, generally rectangular body that presents opposite front and rear faces 102 (only the front face being shown), a pair of parallel side edges 104 and 106, and a pair of parallel end edges 108 and 110 extending between the side edges 104 and 106. The rear face is provided with a magnetic strip 112, and a key chain receiving opening 114 is preferably defined in the upper right hand corner of the card 100. The card 100 consequently has an appearance that is similar to that of a standard identification card. However, the card 100 is much smaller and preferably has a card length of approximately 1.75 inches and a card height of approximately 1.25 inches.

The preferred forms of the invention described above are to be used as illustration only, and should not be utilized in a limiting sense in interpreting the scope of the present invention. Obvious modifications to the exemplary embodiments, as hereinabove set forth, could be readily made by those skilled in the art without departing from the spirit of the present invention.

The inventor hereby states his intent to rely on the Doctrine of Equivalents to determine and assess the reasonably fair scope of the present invention as pertains to any apparatus not materially departing from but outside the literal scope of the invention as set forth in the following claims.

What is claimed is:

1. An identification card comprising:  
a substantially flat body presenting a front face, an opposite rear face, a pair of  
5 elongated spaced apart side edges defining a card length therebetween,  
and a pair of elongated spaced apart end edges extending between the  
side edges and defining a card height therebetween,  
said card length being approximately 1.75 to 3 inches,  
said card height being no more than approximately 1.625 inches and being at  
10 least 1.1875 inches along at least a portion of the card length,  
said rear face of the body being provided with an encodeable magnetic strip  
extending between the side edges.
2. An identification card as claimed in claim 1,  
15 said magnetic strip extending along substantially the full card length.
3. An identification card as claimed in claim 1,  
said body having a key chain receiving opening defined therein.
- 20 4. An identification card as claimed in claim 3,  
said body including at least one corner defined by one of the side edges and an  
adjacent one of the end edges,  
said key chain receiving opening being located adjacent said at least one corner.
- 25 5. An identification card as claimed in claim 1,  
said card height varying along the card length.
- 30 6. An identification card as claimed in claim 5,  
one of said end edges including a first section that extends inwardly from one of  
the side edges, a second section that extends inwardly from the other one  
of the side edges and is spaced from the first section, and a transition  
section extending between the first and second sections,  
said card height being greater along the first section than along the second  
section.

7. An identification card as claimed in claim 6,  
said first and second sections of said one of the end edges being substantially  
straight.

5 8. An identification card as claimed in claim 7,  
the other of said end edges being substantially straight,  
said magnetic strip being located adjacent said other one of the end edges.

10 9. An identification card as claimed in claim 1,  
said card length being approximately 2.125 inches.

15 10. An identification card as claimed in claim 7,  
one of said end edges including a substantially straight first section that extends  
inwardly from one of the side edges, a substantially straight second  
section that extends inwardly from the other one of the side edges and  
is spaced from the first section, and a transition section extending  
between the first and second sections,  
said card height being approximately 1.313 inches along the first section and  
approximately 1.00 inch along the second section.

20 11. An identification card as claimed in claim 1,  
said card length being approximately 1.75 inches and said card height being  
approximately 1.25 inches.

25 12. An identification card as claimed in claim 1,  
said body being formed of a synthetic resin material.

## ABSTRACT OF THE DISCLOSURE

5 A small identification card comprises a substantially flat body presenting opposite front and rear faces. The card length defined between the pair of elongated spaced apart side edges of the body is approximately 1.75 to 3.00 inches. The card height defined between the pair of elongated spaced apart end edges extending between the side edges is no more than approximately 1.625 inches and is at least 1.1875 inches along at least a portion of the card length. Moreover, the rear face of the body is provided with an encodeable magnetic strip that extends between the side edges.

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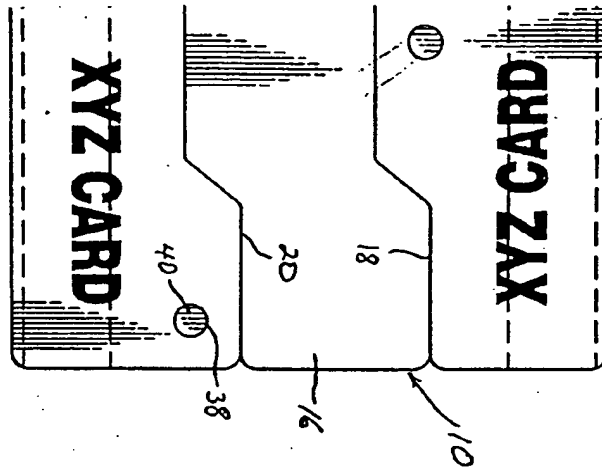


Fig. 1.

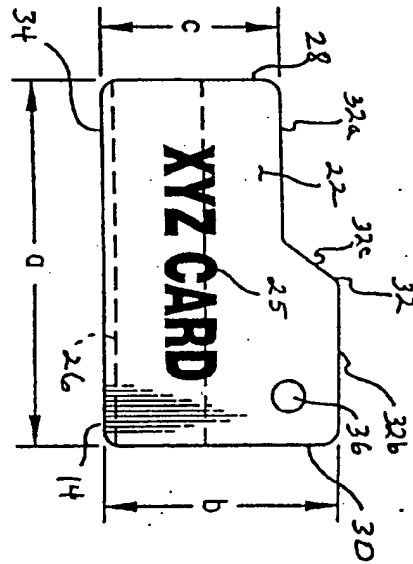


Fig. 2.

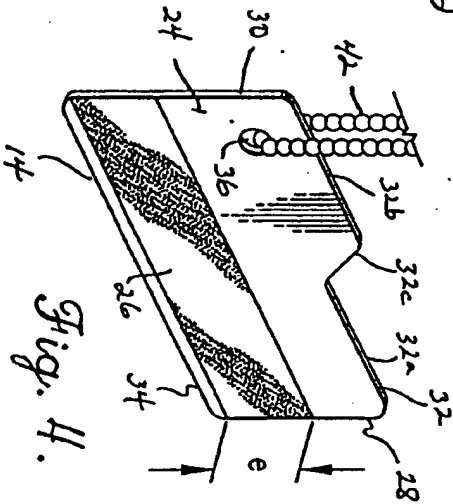


Fig. 4.

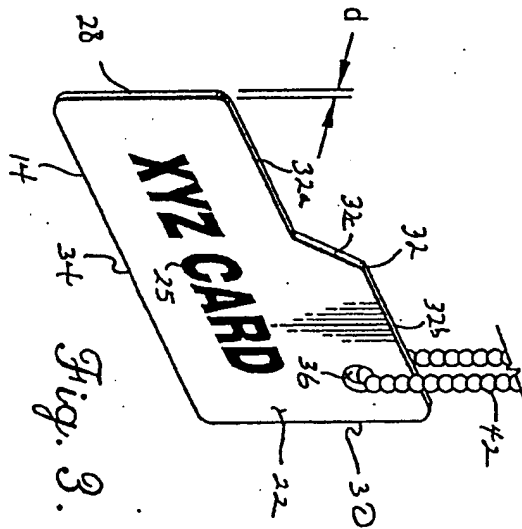


Fig. 3.

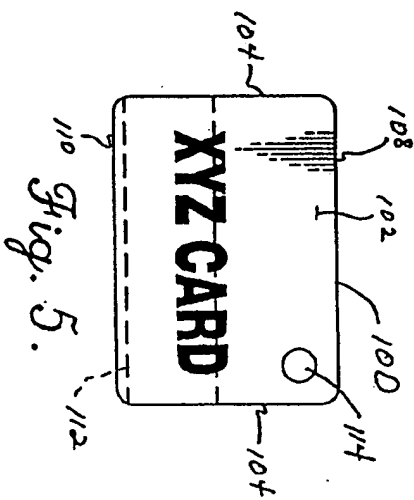


Fig. 5.

